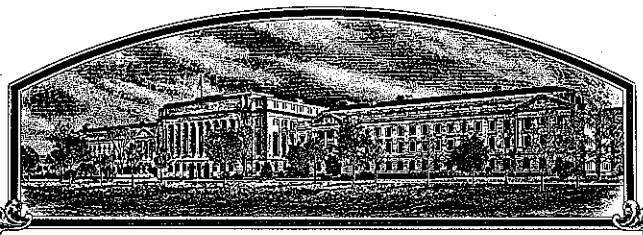


No. 9100186

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pioneer Hi-Bred International, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'9583'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington, D.C. *this* 31st *day of* August *in the year of our Lord one thousand nine hundred and* ninety-two.

Attest:

Kenneth Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Edward Madigan
Secretary of Agriculture

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Office, OIRM, Room 404-W, Washington, D.C. 20250; and to the Office of Management and Budget, Paperwork Reduction Project (OMB #0581-0055), Washington, 20250.
FORM APPROVED: OMB 0581-0055, Expires 1/31/91

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
Pioneer Hi-Bred International, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.

3. VARIETY NAME
9583

4. ADDRESS *(street and no. or R.F.D. no., city, state, and ZIP)*
700 Capital Square
400 Locust Street
Des Moines, IA 50309

5. PHONE *(Include area code)*
515-270-3414

FOR OFFICIAL USE ONLY

PVPO NUMBER
9100186

FILING
Date: May 15 1991
Time: ☐ A.M. ☐ P.M.

FEES RECEIVED
Filing and Examination Fee: $ 2,150.—
Date: May 13, 1991
Certificate Fee: $ 250.00
Date: August 3, 1992

6. GENUS AND SPECIES NAME
Glycine max

7. FAMILY NAME *(Botanical)*
Leguminosae

8. CROP KIND NAME *(Common Name)*
Soybean

9. DATE OF DETERMINATION
July, 1985

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Iowa

12. DATE OF INCORPORATION
1926

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

James E. Miller, Ph.D.
7301 NW 62nd Ave., P.O. Box 85
Johnston, IA 50131-0085

Mary Helen Mitchell (copy)
700 Capital Square, 400 Locust Street
Des Moines, IA 50309
PHONE *(Include area code)*:

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow INSTRUCTIONS on reverse)*

a. ☒ Exhibit A, Origin and Breeding History of the Variety.
b. ☒ Exhibit B, Novelty Statement.
c. ☒ Exhibit C, Objective Description of Variety.
d. ☐ Exhibit D, Additional Description of Variety.
e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.
f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office 05/15/91.
g. ☒ Filing and Examination Fee ($2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See section 83(a) of the Plant Variety Protection Act.)*
☐ YES *(If "YES," answer items 16 and 17 below)* ☒ NO *(If "NO," skip to item 18 below)*

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ YES *(If "YES," through* ☐ Plant Variety Protection Act ☐ Patent Act. Give date: _____.)
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☐ YES (If "YES," give names of countries and dates)
☒ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*	CAPACITY OR TITLE	DATE
James E. Miller	Worldwide Soybean Research Director	5/9/91
SIGNATURE OF APPLICANT *(Owner(s))*	CAPACITY OR TITLE	DATE

EXHIBIT A

ORIGIN AND BREEDING HISTORY

9583

Winter 1981-82	Original cross was made in the greenhouse at St. Joseph, IL. Cross number was PX4381 Parentage = 9591/9471 9591 = Essex/York 9471 = Williams/Essex
Summer 1982	F1 plants grown in field at Union City, TN.
Winter 1982-83	F2 advanced to F3 by modified single seed descent during 2 cycles in Hawaii.
Summer 1983	F3 bulks of PX 4381 planted at Union City. Advanced to F4 by modified single seed descent.
Winter 1983-84	F4 advanced to F5 by one cycle of modified single seed descent in Hawaii.
Summer 1984	F5 bulks of PX4381 grown at Union City and single plants selected.
Summer 1985	F5-derived plant rows of PX4381 were yield tested at Union City. Entry 55 in UNF517 was selected for advancement.
Summer 1986	PX4381-42 was entered in UNC528 as entry 27 and planted as 2 replications at 2 locations.
Summer 1987-90	Subsequent wide area testing over these 4 years has shown 9583 to be uniform and stable for all plant traits from generation to generation with no evidence of variants. 5.0 acres of 9583 (breeder's seed) were grown in Tennessee during 1989. 100 acres of parent seed (foundation seed equivalent) were grown in Arkansas during 1990.

EXHIBIT B

NOVELTY STATEMENT

9583

9583 is most similar to variety 9591. Both varieties have excellent resistance to Stem Canker caused by Diaporthe phaseolorum var. caulivora. Both varieties have excellent resistant to a field prevalent race of Cercospora sojina. 9583 has white flowers however, while 9591 has purple flowers.

Hutcheson is the closest variety with white flowers and gray pubescence like 9583, however it 1.5 days earlier than 9583 (Table 1).

EXHIBIT E

STATEMENT OF THE BASIS OF

APPLICANT'S OWNERSHIP

Variety 9583 was brought to market solely by Pioneer Hi-Bred International, Inc., for which it solicits a certificate of protection.

FORM APPROVED: OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Pioneer Hi-Bred International, Inc.		9583

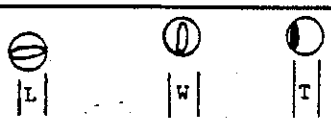
ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*
700 Capital Square
400 Locust Street
Des Moines, IA 50309

FOR OFFICIAL USE ONLY
PVPO NUMBER
9100186

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:

[2]



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ **2. SEED COAT COLOR: (Mature Seed)**

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other *(Specify)* _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

[1] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ **4. SEED SIZE: (Mature Seed)**

[1][4] Grams per 100 seeds

★ **5. HILUM COLOR: (Mature Seed)**

[1] 1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other *(Specify)* _____

★ **6. COTYLEDON COLOR: (Mature Seed)**

[1] 1 = Yellow 2 = Green

★ **7. SEED PROTEIN PEROXIDASE ACTIVITY:**

[ ] 1 = Low 2 = High

★ **8. SEED PROTEIN ELECTROPHORETIC BAND:**

[ ] 1 = Type A ($SP1^a$) 2 = Type B ($SP1^b$)

★ **9. HYPOCOTYL COLOR:**

[1] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ **10. LEAFLET SHAPE:**

[2] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other *(Specify)* _____

11. LEAFLET SIZE:

[2] 1 = Small ('Amsoy 71'; 'A5312') 2 = Medium ('Corsoy 79'; 'Gasoy 17')
3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[3] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton')
3 = Dark Green ('Gnome'; 'Tracy')

★ **13. FLOWER COLOR:**

[1] 1 = White 2 = Purple 3 = White with purple throat

★ **14. POD COLOR:**

[1] 1 = Tan 2 = Brown 3 = Black

★ **15. PLANT PUBESCENCE COLOR:**

[1] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[1] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton')
3 = Bushy ('Gnome'; 'Govan')

★ **17. PLANT HABIT:**

[1] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will')
3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ **18. MATURITY GROUP:**

[0][8] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V
9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

★ **19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)**

BACTERIAL DISEASES:

★ [2] Bacterial Pustule *(Xanthomonas phaseoli* var. *sojensis)*

★ [0] Bacterial Blight *(Pseudomonas glycinea)*

★ [2] Wildfire *(Pseudomonas tabaci)*

FUNGAL DISEASES:

★ [0] Brown Spot *(Septoria glycines)*

Frogeye Leaf Spot *(Cercospora sojina)*

★ [0] Race 1 [0] Race 2 [0] Race 3 [0] Race 4 [0] Race 5 [2] Other *(Specify)* Field prevalent isolates 1987-1989

[0] Target Spot *(Corynespora cassiicola)*

[0] Downy Mildew *(Peronospora trifoliorum* var. *manshurica)*

[0] Powdery Mildew *(Microsphaera diffusa)*

★ [0] Brown Stem Rot *(Cephalosporium gregatum)*

[2] Stem Canker *(Diaporthe phaseolorum* var. *caulivora)*

5

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

★ [0] Pod and Stem Blight *(Diaporthe phaseolorum* var; *sojae)*

[0] Purple Seed Stain *(Cercospora kikuchii)*

[0] Rhizoctonia Root Rot *(Rhizoctonia solani)*

Phytophthora Rot *(Phytophthora megasperma* var. *sojae)*

★ [0] Race 1 [1] Race 2 [0] Race 3 [0] Race 4 [0] Race 5 [0] Race 6 [0] Race 7

[0] Race 8 [0] Race 9 [1] Other *(Specify)* Race 19

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

★ [0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] Pod Mottle (Bean Pod Mottle Virus)

★ [0] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode *(Heterodera glycines)*

★ [0] Race 1 [0] Race 2 [1] Race 3 [1] Race 4 [0] Other *(Specify)* _____

[0] Lance Nematode *(Hoplolaimus Colombus)*

★ [1] Southern Root Knot Nematode *(Meloidogyne incognita)*

★ [0] Northern Root Knot Nematode *(Meloidogyne Hapla)*

[1] Peanut Root Knot Nematode *(Meloidogyne arenaria)*

[0] Reniform Nematode *(Rotylenchulus reniformis)*

[ ] OTHER DISEASE NOT ON FORM *(Specify):* _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

★ [0] Iron Chlorosis on Calcareous Soil

[ ] Other *(Specify)* _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle *(Epilachna varivestis)*

[0] Potato Leaf Hopper *(Empoasca fabae)*

[ ] Other *(Specify)* _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	9591	Seed Coat Luster	9591
Leaf Shape	9591	Seed Size	9591
Leaf Color	Hutcheson	Seed Shape	9591
Leaf Size	9591	Seedling Pigmentation	Hutcheson

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
9583 Submitted	135	1.7	75			44.0	20.3	14	
9591 Name of Similar Variety	136	1.9	72			42.3	22.0	16	

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A_2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

Table 1. Variety 9583 (X1) vs 'Hutcheson' (X2) for maturity in days.

All observations are from plots planted using a randomized complete block design. Planted plot lenth was 21 feet, trimmed to 15 feet. Plot width was 4 30 inch rows, or 10 feet. Maturity was scored as the number of days from planting until 95% of the pods in the plot were mature. Data is presented separately for 1989 and 1990 with overall statistics following.

REP	X1	X2	X1-X2	(X1-X2)2	
1989					
1	121	119.7	1.3	1.69	SD**2= 0.13167
2	151	148.7	2.3	5.29	SD= 0.36286
3	153	150	3	9	D/SD= 6.33855 **
4	142.3	139.7	2.6	6.76	DF= 3
					n= 4
sum	567.3	558.1	9.2	22.74	ave 9583 = 141.825
ave	141.8	139.5	2.3		ave Hutcheson = 139.525
1990					
5	122.3	121.7	0.6	0.36	SD**2= 0.18099
6	146	144	2	4	SD= 0.42543
7	132.3	131.3	1	1	D/SD= 3.78226 **
8	137	136.7	0.3	0.09	DF= 10
9	118.5	117	1.5	2.25	
10	148.7	145.7	3	9	n= 11
11	132.3	131	1.3	1.69	
12	136.7	135.7	1	1	ave 9583 = 134.955
13	119	119	0	0	ave Hutcheson = 133.345
14	145	140	5	25	
15	146.7	144.7	2	4	
sum	1485	1467	17.7	48.39	
ave	135	133.3	1.609		
OVERALL					
1	121	119.7	1.3	1.69	SD**2= 0.109
2	151	148.7	2.3	5.29	SD= 0.33015
3	153	150	3	9	D/SD= 5.43193 **
4	142.3	139.7	2.6	6.76	DF= 14
5	122.3	121.7	0.6	0.36	
6	146	144	2	4	n= 15
7	132.3	131.3	1	1	
8	137	136.7	0.3	0.09	ave 9583 = 136.787
9	118.5	117	1.5	2.25	ave Hutcheson = 134.993
10	148.7	145.7	3	9	
11	132.3	131	1.3	1.69	
12	136.7	135.7	1	1	
13	119	119	0	0	
14	145	140	5	25	
15	146.7	144.7	2	4	
sum	2052	2025	26.9	71.13	
ave	136.8	135	1.793		

9100186

Table 2. 9583 vs Hutcheson for lodging.

All observations are from plots planted using a randomized complete block design. Planted plot length was 21 feet, trimmed to 15 feet. Plot width was 4 30 inch rows, or 10 feet. Lodging was scored on a 1 to 9 scale. On this scale a score of 9 means all plants in the plot were completely upright, whereas a score of 1 means all plants were completely procumbent. Data was collected in the 1991 growing season.

	9583	Hutcheson		
REP	X1	X2	X1-X2	(X1-X2)**2
1	9	8	1	1
2	8	8	0	0
3	9	8	1	1
4	8	8	0	0
5	8	8	0	0
6	8	8	0	0
7	8	6	2	4
8	8	7	1	1
9	8	8	0	0
10	8	8	0	0
11	8	8	0	0
12	9	7	2	4
13	9	9	0	0
14	8	8	0	0
15	9	8	1	1
16	8	8	0	0
17	9	7	2	4
18	8	7	1	1
19	9	8	1	1
20	8	6	2	4
21	8	6	2	4
22	8	8	0	0
23	9	7	2	4
24	9	8	1	1
25	8	7	1	1
26	8	8	0	0
27	7	6	1	1
28	8	8	0	0
29	8	8	0	0
30	8	8	0	0
31	8	7	1	1
32	8	7	1	1
sum	264	241	23	35
ave	8.25	7.531	0.719	

SD**2= (35 - (23**2 / 32)) / (32*31)
SD**2= 0.01862
SD= 0.13645
t = 0.719 / 0.13645
t = 5.26763 ** significant 1% level
DF= 31

n (groups of individuals) = 32

ave lodging score of 9583 = 8.25
ave lodging score of Hutcheson = 7.53125

9100186

Table 3. 9583 vs FFR561 for lodging.

All observations are from plots planted using a randomized complete block design. Planted plot length was 21 feet, trimmed to 15 feet. Plot width was 4 30 inch rows, or 10 feet. Lodging was scored on a 1 to 9 scale. On this scale a score of 9 means all plants in the plot were completely upright, whereas a score of 1 means all plants were completely procumbent. Data was collected in the 1991 growing season.

REP	9583 X1	FFR561 X2	X1-X2	(X1-X2)**2
1	7	6	1	1
2	7	7	0	0
3	7	7	0	0
4	7	6	1	1
5	8	8	0	0
6	8	7	1	1
7	8	7	1	1
8	7	7	0	0
9	9	9	0	0
10	8	7	1	1
11	9	8	1	1
12	8	8	0	0
13	8	7	1	1
14	8	7	1	1
15	8	8	0	0
16	8	8	0	0
17	8	7	1	1
18	8	8	0	0
19	8	8	0	0
20	9	8	1	1
21	9	9	0	0
22	8	8	0	0
23	9	8	1	1
24	8	8	0	0
25	9	8	1	1
26	9	7	2	4
27	8	7	1	1
28	8	8	0	0
29	8	6	2	4
30	9	7	2	4
31	9	6	3	9
32	8	8	0	0
33	8	7	1	1
34	7	7	0	0
35	8	7	1	1
36	8	8	0	0
37	8	8	0	0
38	8	6	2	4
39	8	8	0	0
sum	315	289	26	40
ave	8.077	7.41	0.667	

SD**2= (40 - (26**2 / 39)) / (39*38)
SD**2= 0.01529
SD= 0.12367
t = 0.667 / 0.12367
t = 5.39062 ** significant 1% level
DF= 38

n (groups of individuals) = 39

ave lodging score of 9583 = 8.07692
ave lodging score of FFR561 = 7.41026

9100186

Table 4. 9583 vs FFR561 for height.

All observations are from plots planted using a randomized complete block design. Planted plot length was 21 feet, trimmed to 15 feet. Plot width was 4 30 inch rows, or 10 feet. Height was scored as the average height in inches of the total plot. Data was collected in the 1991 growing season.

REP	9583 X1	FFR561 X2	X1-X2	(X1-X2)**2
1	23	27	-4	16
2	27	27	0	0
3	24	27	-3	9
4	22	22	0	0
5	19	23	-4	16
6	19	22	-3	9
7	22	22	0	0
8	24	28	-4	16
9	30	32	-2	4
10	28	38	-10	100
11	28	28	0	0
12	32	34	-2	4
13	27	31	-4	16
14	30	34	-4	16
15	33	39	-6	36
16	30	37	-7	49
17	35	37	-2	4
18	33	41	-8	64
19	33	39	-6	36
20	24	33	-9	81
21	25	32	-7	49
22	22	31	-9	81
23	22	30	-8	64
24	28	31	-3	9
25	25	27	-2	4
26	27	33	-6	36
27	33	37	-4	16
28	32	39	-7	49
29	35	44	-9	81
30	33	37	-4	16
31	31	37	-6	36
32	29	38	-9	81
33	28	42	-14	196
34	22	26	-4	16
35	22	24	-2	4
36	19	24	-5	25
37	23	27	-4	16
38	20	24	-4	16
39	21	27	-6	36
sum	1040	1231	-191	1307
ave	26.67	31.56	-4.9	

SD**2= (1307 - (191**2 / 39) / (39*38)
SD**2= 0.25074
SD= 0.50073
t = -4.9 / 0.50073
t = -9.7805 ** significant 1% level
DF= 38

n (groups of individuals) = 39

ave height of 9583 = 26.6667 inches
ave height of FFR561 = 31.5641 inches

9100186

PVP application No. 9100186, '9583', Exhibit E ammended July 21, 1992

STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

Variety '9583' was developed by Pioneer Hi-Bred International, Inc., for which it solicits a certificate of protection.